

DD08 Series  
Intercept®  
Dome Drive

Installation/  
Operation Manual

C416M-C (1/98)



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## REVISION HISTORY

<u>Manual #</u>	<u>Date</u>	<u>Comments</u>
C416M	9/94	Original version.
C416M-A	6/95	Revised to incorporate exploded view diagram and BOM changes as per ECO# 94-470; Incorporated white "type E" back box availability; Included hardwire system wiring diagram information.
	6/23/95	Addendum. Changed back box wiring diagrams to show 2 A FUS2 fuse as per ECO# 95-063.
C416M-B	9/20/95	Manual revised to include new sound quieting model information, updated hardwire system wiring diagram and related list of materials.
	1/23/96	Figure 14 updated to show new part AA and Section 7.2, Hardware List, revised to show new part AA.
	8/16/96	Added complete assembly numbers for domes in Section 7.1, Mechanical Parts List.
	8/23/96	Figure 13 and 14 updated to show change in part location per ECO# 96-158/96-158A. PARTS LIST (mechanical PARTS LIST Section 7.1) Changed- items 37, 55.
C416M-C	1/98	Completely revised manual to reduce the number of models and modify the installation instructions. Incorporated ECO# 97-155. Changed manual to new format and manual pagination.

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### 1.1 IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by Qualified Service Personnel and conform to all Local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
3. Only use replacement parts recommended by Pelco.
4. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.
5. The installation method and materials should be capable of supporting four (4) times the weight of the enclosure, pan/tilt, camera and lens combination.

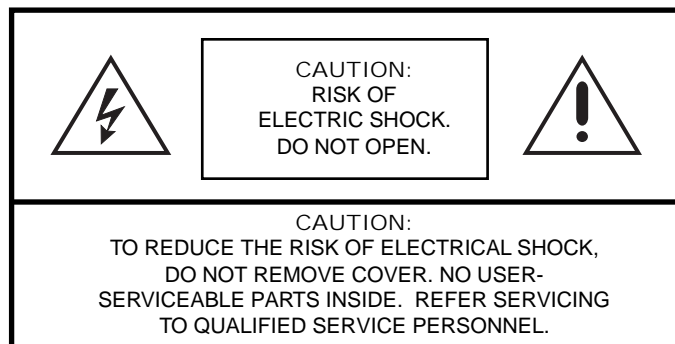
The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

## 1.2 UNPACKING INSTRUCTIONS

Unpack and inspect all parts carefully.

Be sure to save the shipping carton and any inserts. They are the safest material in which to make future shipments.

If an item appears to have been damaged in shipment, replace it properly in its carton and contact the factory at 1-800-289-9100 or 1-559-292-1981 for a replacement. (International customers fax 1-559-348-1120 for authorization and instructions.)

If an item needs to be returned to the factory for repair, consult the WARRANTY AND RETURN section of this manual for instructions.

The following items are supplied:

- 1 Dome drive with receiver/driver and imager/optics package
- 1 Dome liner
- 1 Installation/Operation Manual (C416M-C)

## 1.3 RECOMMENDED TOOLS

Pelco does not supply basic tools needed for the installation process. The following tools are recommended:

1/4" wrench (DD08C2L and DD08E2L models only)

5/64" Allen wrench (DD08C2L and DD08E2L models only)

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## 2.0 DESCRIPTION

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The DD08 Series of dome drives is part of the IDS08 Intercept® Series of domes. The IDS08 Series is an integral system that includes a back box (BB08), dome drive (DD08), dome receiver/driver (DRD08), and imager/optics package (IOP08).

This manual covers the DD08 Series of dome drives. For installation and operation instructions for the back box, refer to manual C456M-D; for the dome receiver/driver, refer to C466M-E; and for the imager/optics package, refer to C1441M-C.

### 2.1 MODELS

DD08C2L	Dome drive with 360° rotation and fixed pan speed of 24° per second. Includes plastic dome liner (dome is included with back box).
DD08E2L	Same as the DD08C2L with preset positioning.
DD08E3L	Dome drive with 360° rotation, variable pan speed from 0-200° per second, and preset positioning. Includes plastic dome liner (dome is included with back box).

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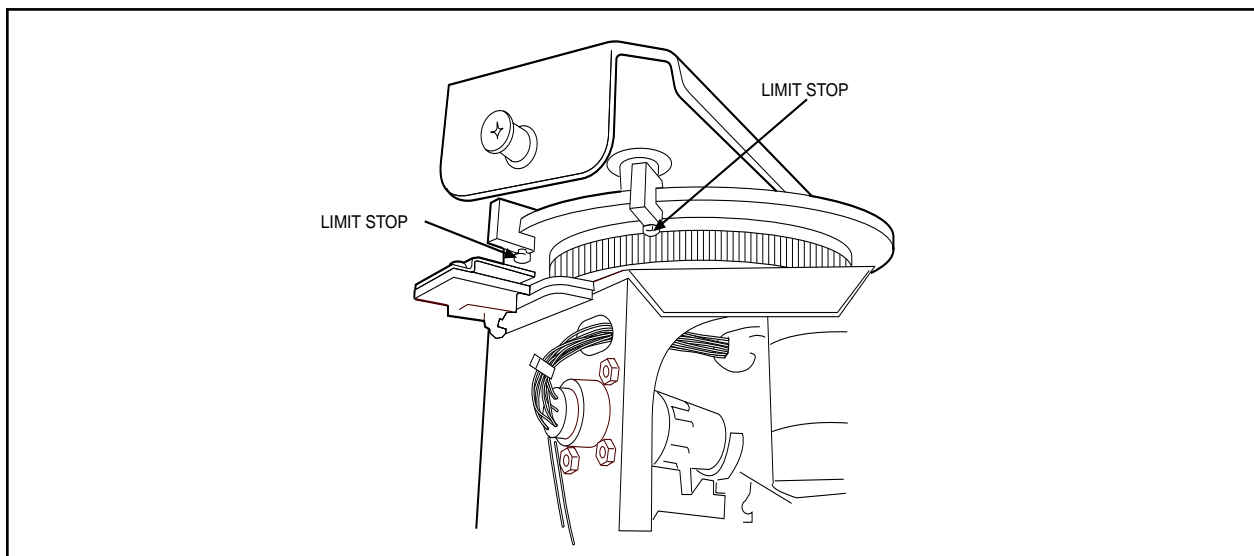
## 3.0 INSTALLATION

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Proceed with the installation of the dome drive after you have installed the back box.

1. Refer to Figure 6 and remove the shipping bracket (item 37).
2. Refer to the manual for the receiver/driver and set the jumpers and switches as required for your application.
3. **DD08C2L and DD08E2L Models Only** - The dome drives are capable of 360° rotation. However, pan limit stops have been installed at the factory on the pan gear that limit the rotation to 355°. If you prefer 360° rotation, remove three the pan limit stops (refer to Figure 1) using a 5/64" Allen wrench and 1/4" wrench. If you prefer to use the pan limit stops, you will adjust them later in this procedure.
4. Make sure the power switch inside the back box is off.
5. Remove the hairpin clips from the two latches inside the back box (refer to Figure 2) and open the latches.
6. Insert the dome drive into the back box:
  - a. Refer to Figure 2 and line up the upper bracket on the dome drive so that:
    - The 25-pin connector on the dome drive will go into its mating connector on the back box.
    - The latch pins on the sides of the upper bracket will go into the latches in the back box.
    - The two guide pins on the back box will go into the bushings on the upper bracket of the dome drive.
  - b. Push the dome drive into place and close the latches.
  - c. Reinstall the hairpin clips in the latches to prevent the latches from opening.



**Figure 1.** Pan Limits Stops (Only Two Shown)



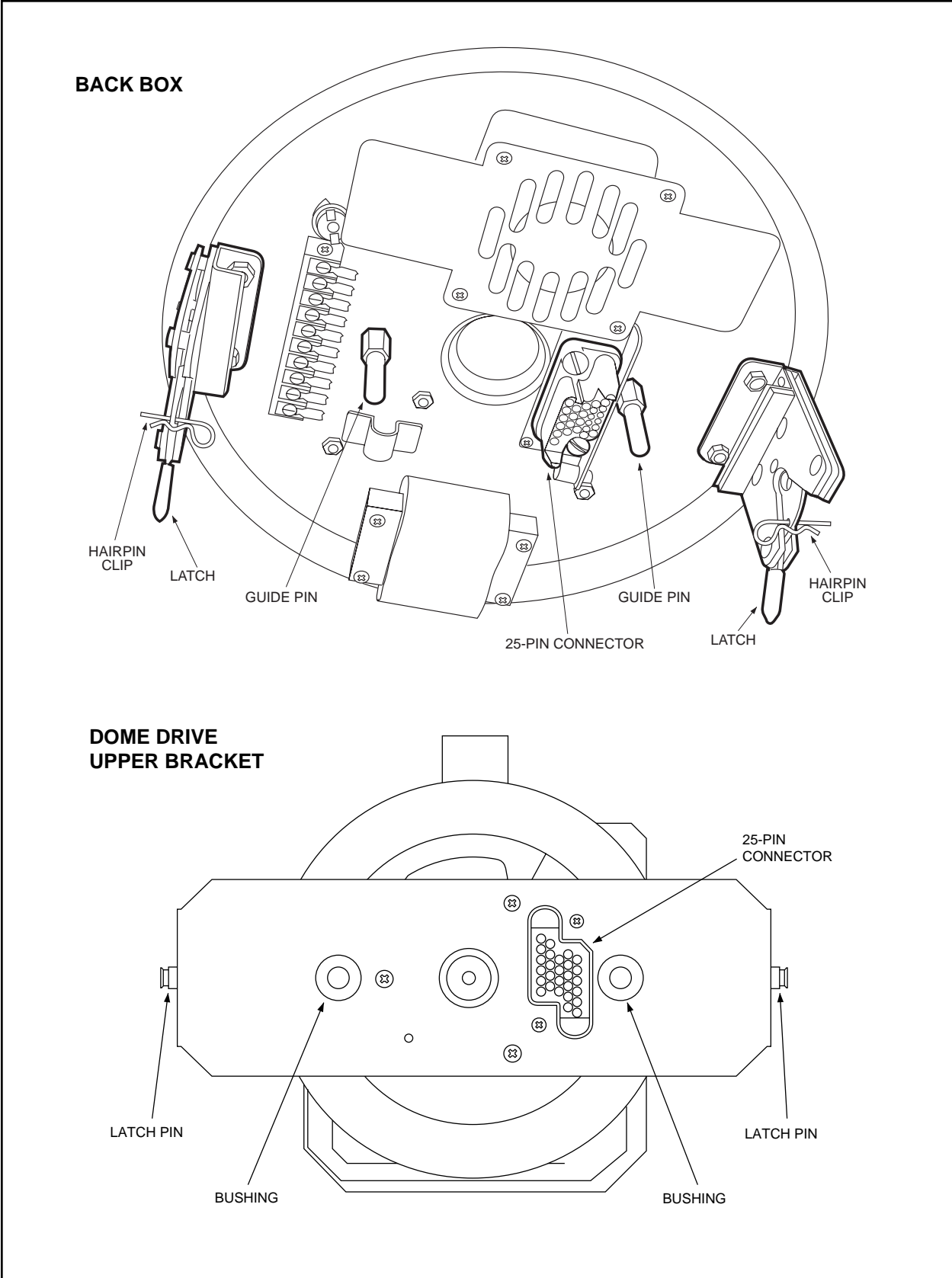


Figure 2. Back Box and Dome Drive Components

NOTE: *The tilt limit stops are not adjustable.*

7. Turn on the power switch inside the back box. In about 15 seconds, the unit will begin to move and go through its start-up routine.
8. Refer to the manual for the camera/lens to set the switches on the camera as required for your application.
9. **DD08C2L and DD08E2L Models Only** - If you removed the pan limit stops earlier, skip this step.

To adjust the pan limit stops:

- a. Pan the unit to the desired left position.
- b. Turn off the power switch inside the back box.
- c. Position the limit stop and tighten it in place. Disconnect the drive from the back box, if necessary, to make the adjustment.

To remove the dome drive:

1. Remove the hairpin clips from the latches.
  2. Open one of the latches.
  3. Grasp the unit with one hand to prepare for the 10- to 13-pound (4.5-5.9 kg) load.
  4. Open the other latch and lower the dome drive.
  - d. Replace the dome drive if it was removed and turn on the power. Check the position of the limit stop to make sure it is correct. If the position of the stop is not correct, repeat steps a-d.
  - e. Repeat steps a-d for the right limit stop.
10. Install the dome liner: Push the studs on the liner into the dome bracket. Make sure the window slot is aligned with the lens.
  11. **Suspended Ceiling Models** - Attach the trim ring and dome to the back box.  
**Pendant Models** - Align the three bezel pins with the large hole in the back box brackets; push the bezel up and rotate clockwise to latch.
  12. The installation is complete. For operating instructions, refer to the receiver/driver manual.

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## 4.0 MAINTENANCE

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Regularly scheduled maintenance will prolong the operational life and appearance of the equipment.

Clean the dome with a nonabrasive cleaning cloth and antistatic cleaner that is safe for use on acrylic plastic. Do not use kerosene or similar substances that can scratch the surface.

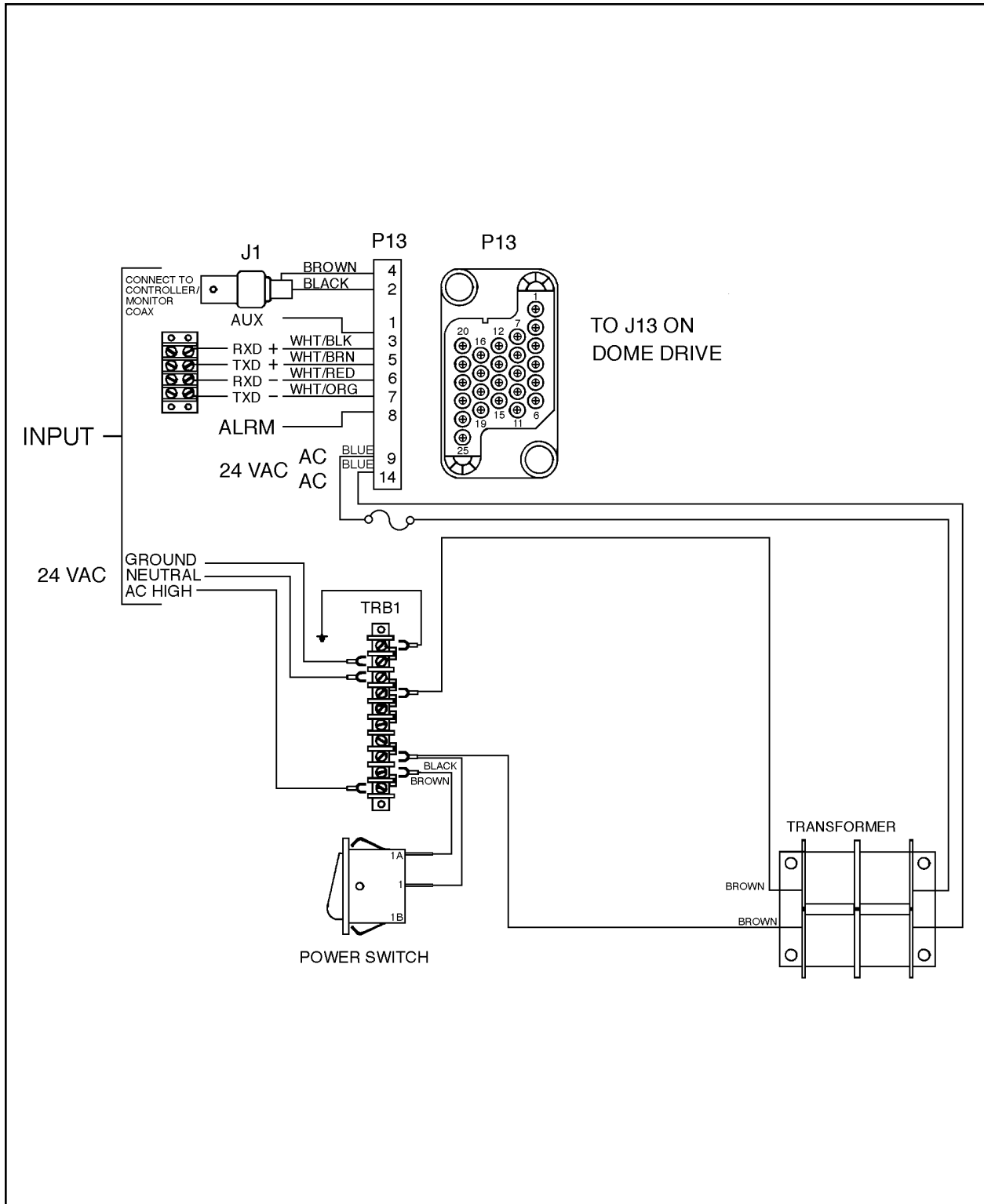
The dome drive should also be inspected and any dust and debris blown off. Pay special attention to the gear drives. After removing dust and debris a film of silicone lubricant should be applied to the gears for prolonged life. It is recommended that the unit be checked at six-month intervals.

No adjustments are required.

### 4.1 DOME DRIVE REMOVAL

1. Remove the back box trim ring or bezel. To remove a bezel, turn it about 1/2" (1.27 cm) counterclockwise and pull down.
2. Turn off the power switch inside the back box.
3. Remove the hairpin clips from the latches.
4. Open one of the latches.
5. Grasp the unit with one hand to prepare for the 10- to 13-pound (4.5 to 5.9 kg) load.
6. Open the other latch and lower the dome drive.

## 5.0 WIRING DIAGRAMS



**Figure 3.** 24 VAC Back Box Wiring Diagram

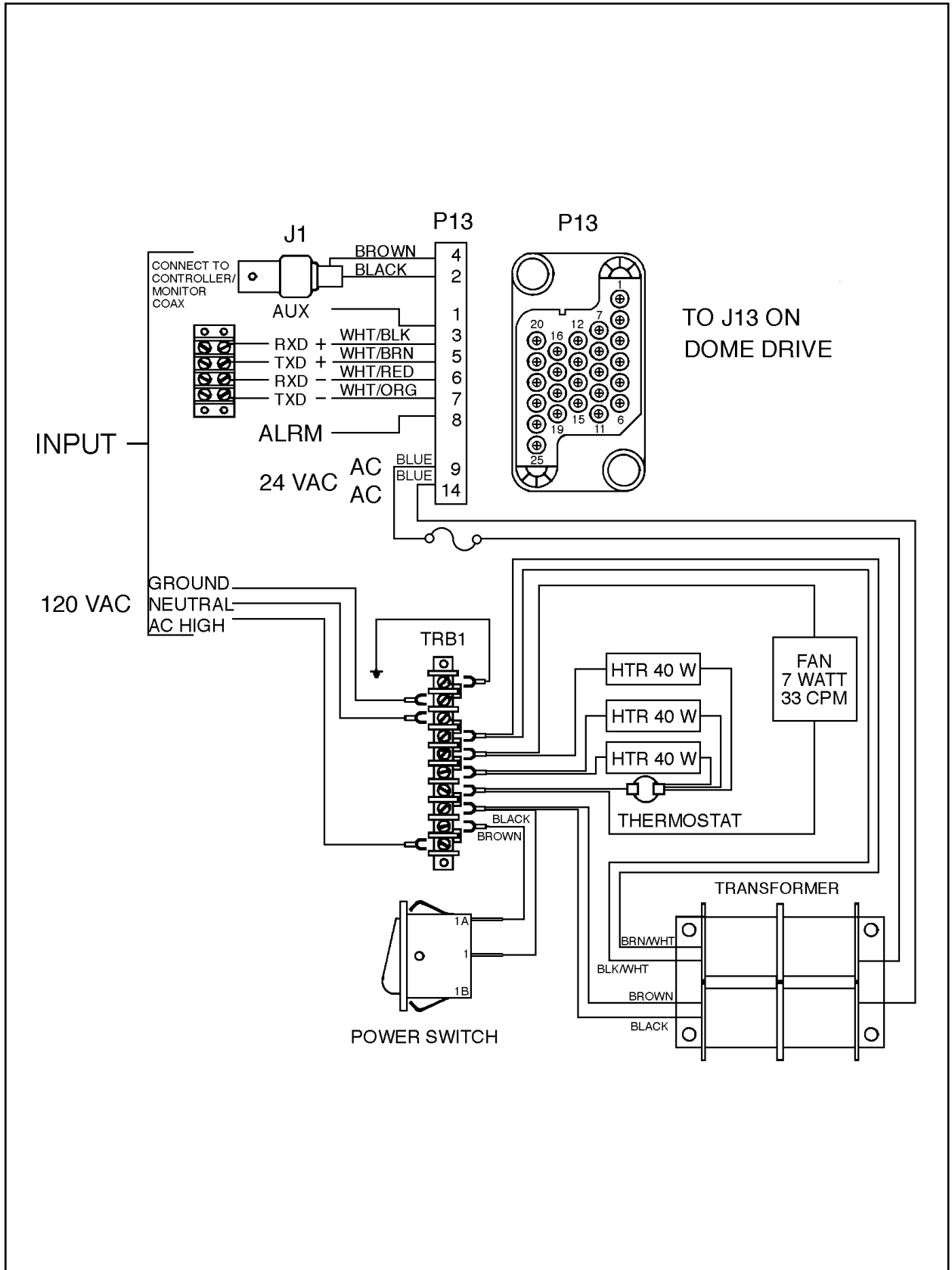


Figure 4. 120 VAC Back Box Wiring Diagram

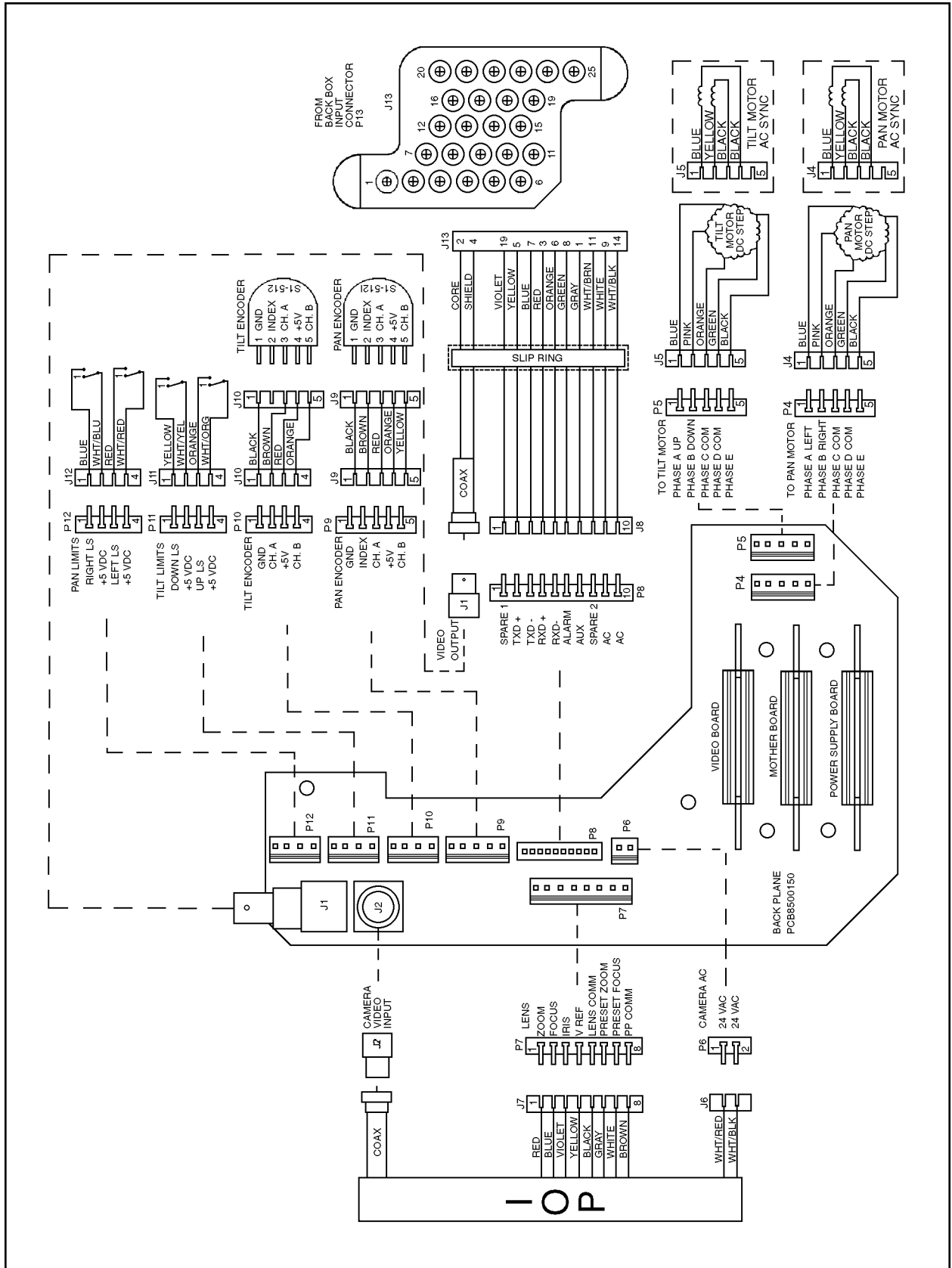
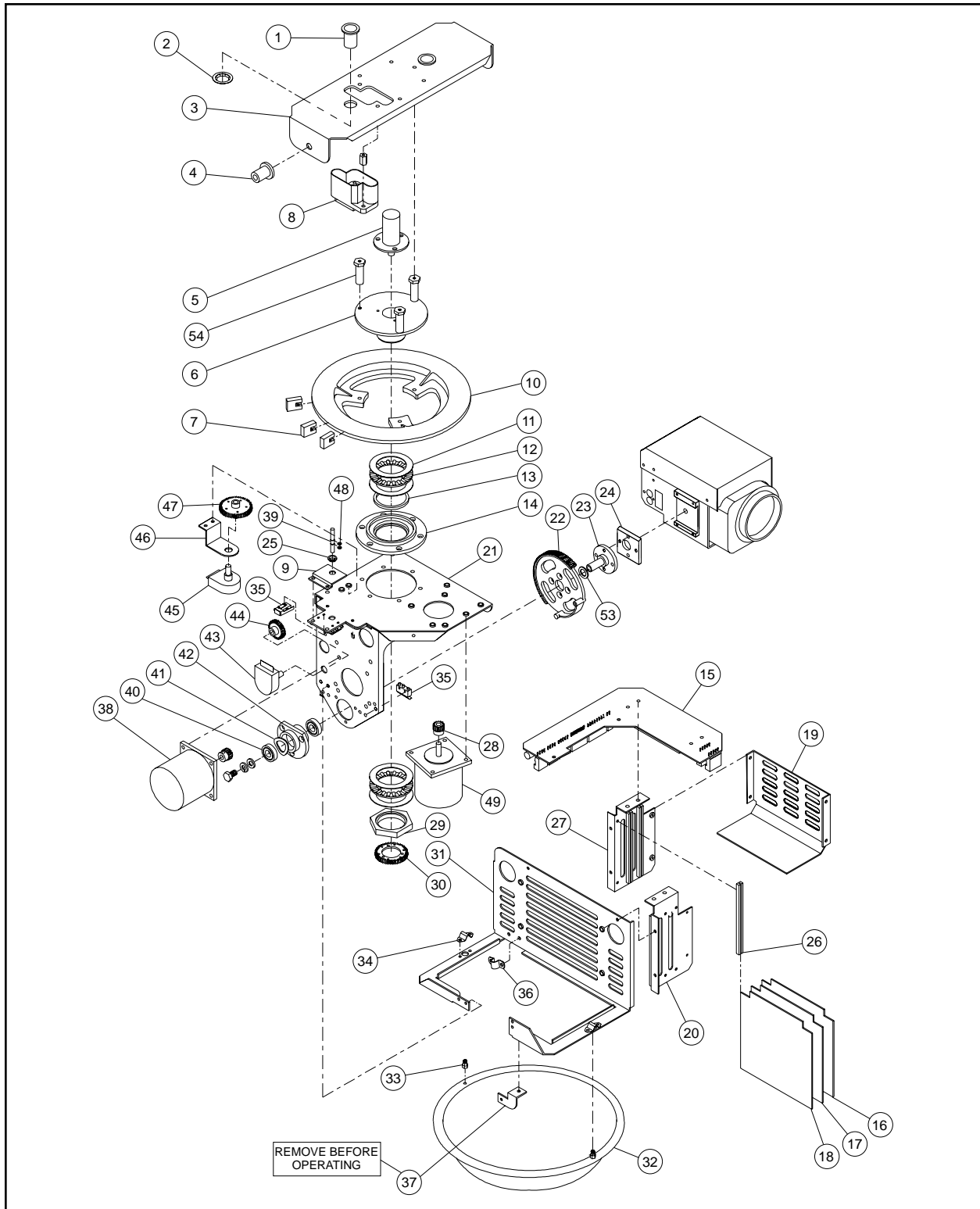


Figure 5. Dome Drive Wiring Diagram

## 6.0 EXPLODED ASSEMBLY DIAGRAMS



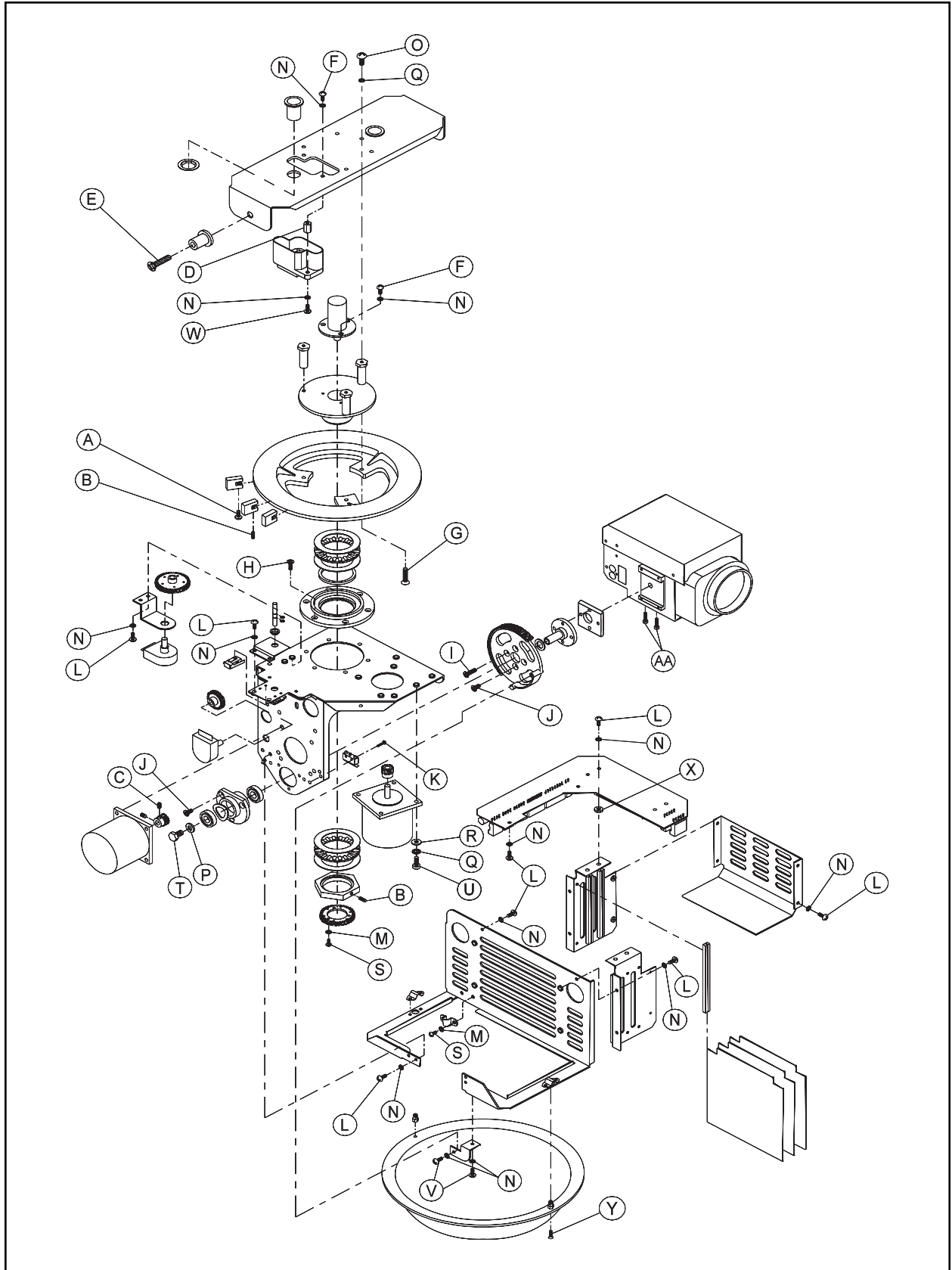
**Figure 6.** DD08 Series Dome Drive Exploded Assembly Diagram (Mechanical)

**Table A. DD08 Series Dome Drive Exploded Assembly Parts List (Mechanical)**

Item	Quantity	Description	Part Number
1	2	Bushing	80010004
2	2	Push nut	80010011
3	1	Upper drive mount bracket	8004034COMP
4	2	Dome drive latch pin	8004145COMP
5	1	Slip ring, 10-lead	SR10-1
6	1	Spindle	8004004COMP
7	3	Pan limit stop (except DD08E3L model)	80010050
8	1	25-position connector receptacle	CON10J025Z41T
9	1	Pan limit pin bracket (except DD08E3L model)	8004013COMP
10	1	Pan gear	80010012
11	4	Thrust washer	90010002
12	2	Thrust bearing	90010001
13	1	Bronze bearing	90010029
14	1	Pan bearing boss	8004002COMP
15	1	PC board assy, backplane	*
16	1	PC board assy, power supply	*
17	1	PC board assy, CPU	*
18	1	PC board assy, video processor	*
19	1	Receiver/driver cover	8004010COMP
20	1	Bracket, receiver PCB guides	8004009COMP
21	1	Dome drive frame	8081000WA
22	1	Tilt gear	80010013
23	1	Tilt shaft	8004018COMP
24	1	Quick connect for lens	8004062COMP
25	1	Grommet (except DD08E3L model)	GRO2172N
26	6	PC board guides	MMS300-4.25
27	1	Bracket, receiver PC board guide	8004008COMP
28	2	Motor gear	80010101
29	1	Pan spindle nut	9004004COMP
30	1	Gear, preset, pan spindle (except DD08C2L model)	8004006COMP
31	1	Dome bracket	8084001COMP
32	1	ABS dome liner	80810009
33	2	Ball stud	PT180410000
34	2	Ball stud receiver	PT180410001
35		Switch, with actuator:	SW1111SM1
	2	DD08E3L (tilt only)	
	4	DD08C2L and DD08E2L (pan and tilt)	
36	1	Wire fatigue clamp	80010016
37	1	Shipping stabilizer bracket (** REMOVE BEFORE OPERATING **)	8084203COMP
38	1	Tilt motor:	
		Stepper, DC, vari-speed, type 3 drive	8008000
		24 VAC, 14 rpm, w/gearhead, type 2 drive	8008214
39	1	Pan limit pin (except DD083EL model)	8004011COMP
40	2	Sealed bearing	80010000
41	1	Wave spring	80010002
42	1	Boss, bearing, tilt	8004000COMP
43	1	Encoder, preset tilt (except DD08C2L)	ENCS1-512
44	1	Gear, preset tilt (except DD08C2L)	28010017
45	1	Encoder, preset pan (except DD08C2L)	ENCS1-512I
46	1	Bracket, pan preset encoder (except DD08C2L)	8004012COMP
47	1	Gear, pan preset encoder (except DD08C2L)	PT250010002
48	2	Snap ring (except DD08E3L)	15510000
49	1	Pan motor:	
		Stepper, DC, vari-speed, type 3 drive	8008000
		24VAC, 48 rpm, w/gearhead, type 2 drive	8008248
53	1	Shim, 3/8" ID x 5/8" OD x .047 thick	ZHSHIM.047
54	3	Spindle standoff	8004123COMP
55		Spacer:	
	1	Motor, tilt, vari-speed (not shown)	8084003COMP
	1	Motor, tilt, AC (not shown)	8084002COMP

\* Refer to dome receiver/driver manual for part number.





**Figure 7.** DD08 Series Dome Drive Exploded Assembly Diagram (Hardware)

**Table B.** DD08 Series Dome Drive Exploded Assembly Parts List (Hardware)

Item	Quantity	Description	Part Number
A	2	Screw, 8-32 x 3/8", hex head (except DD08E3L)	ZH8-32X.375HMSS
B	1	Allen set screw, 8-32 x 1/4", black	ZH8-32X.250S
	2	DD08E3L only	
	2	DD08C2L and DD08E2L only	
C	4	Allen set screw, 8-32 x 3/16", black	ZH8-32X.187S
D	2	Spacer, 1/4" hex x 1/2" long, 6-32 tapped	SPA8423
E	2	Screw, 1/4-20 x 1" flat head, Phillips	ZH1/420X1.00SFS
F	5	Screw, 6-32 x 3/8" pan head, Phillips	ZH6-32X.375SPP
G	3	Screw, 8-32 x 3/4", flat head, Phillips	ZH8-32X.750SFS
H	6	Screw, 6-32 x 3/8" flat head, Phillips	ZH6-32X.375SFP
I	2	Screw, 8-32 x 1/2" flat head, Phillips	ZH8-32X.500SFS
J	5	Screw, 8-32 x 3/8" flat head, Phillips	ZH8-32X.375SFP
K	5	Screw, 2-56 x 7/16" pan head, Phillips	ZH2-56X.437SPP
	8	DD08C2L and DD08E2L only	
	4	DD08E3L only	
L	21	Screw, 6-32 x 3/8" pan head, Phillips, black	ZH6-32X.375BPP
M	2	Internal star washer, #4, SS	ZH4LWSIS
	5	DD08C2L only	
	5	DD08E2L and DD08E3L only	
N	28	Internal star washer, #6	ZH6LWSIS
O	3	Screw, 8-32 x 1/2" pan head, Phillips	ZH8-32X.500SPP
P	1	Split lock washer, 1/4"	ZH1/4LWSSL
Q	11	Internal star washer, #8	ZH8LWSIS
R	8	Flat washer, #8	ZH188X435X60C
S	8	Screw, 4-40 x 1/4" pan head, Phillips	ZH4-40X.250SPP
	2	DD08C2L only	
	5	DD08E2L and DD08E3L only	
T	1	Screw, 1/4-20 x 1/2", hex head	ZH1/4-20X.500CH
U	8	Allen screw, 8-32 x 1/2"	ZH8-32X.500CS
V	2	Screw, 6-32 x 1/4" pan head, Phillips	ZH6-32X.250SPP
W	2	Screw, 6-32 x 1/2" pan head, Phillips	ZH6-32X.500SPP
X	4	Nylon washer	ZH131X361X62N
AA	2	Screw, 4-40 X 5/8" pan head, Phillips	ZH4-40X.625SPP
BB	1	Flat washer, 3/16"	ZH260X562X65C

## 7.0 SPECIFICATIONS

### MECHANICAL

Pan Movement in horizontal plane:  
 DD08C2L/  
 DD08E2L  
 models: 0-355° with pan limit stops  
 360° without pan limit stops

DD08E3L  
 model: 360°

Tilt: -90° movement from horizontal plane

Pan and Tilt  
 Speeds: The following speeds are available and pre-selected by customer at time of order:

Dome Drive Type	Pan Speed	Tilt Speed
DD08C2L	24°/sec ± 1°	12°/sec ± .5°
DD08E2L	24°/sec ± 1°	12°/sec ± .5°
DD08E3L	Variable (0 – 200°/sec)	0-40°/sec ± .5°

Motors: Synchronous, continuous duty, instantaneous reversing (DD08C2L and DD08E2L)  
 Stepper (DD08E3L)

Connectors  
 Video: BNC  
 Gearing: Spur gear

Bearings  
 Pan: Roller thrust bearings and Oilite bronze bushing  
 Tilt: Sealed ball bearing

Braking  
 DD08C2L and DD08E2L: Friction  
 DD08E3L: Magnetic locking

### ELECTRICAL

Power Requirements:

	Variable Speed Unit	All Others
Pan	24 vA	7.5 vA
Tilt	24 vA	7.5 vA
Idle	15 vA	—

Maximum Current: 2 amps per conductor

Camera Input Voltage: 24 VAC

Limit Switches  
 Pan: 5 amp (external adjustment)- DD08C2L & DD08E2L models only  
 Tilt: 5 amp (factory set)

### GENERAL

Construction  
 Pan/Tilt: Aluminum with stainless steel hardware  
 Dome Liner: Plastic  
 Max. Weight: 11 lbs (5 kg)  
 (combined weight of dome drive with camera/lens, integral receiver/driver and dome)

*(Design and product specifications subject to change without notice.)*

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## 8.0 WARRANTY AND RETURN INFORMATION

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### WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one (1) year after the date of shipment. Exceptions to this warranty are as noted below:

- Two (2) years on all standard motorized and fixed focal length lenses.
- Two (2) years on Legacy<sup>®</sup>, Intercept<sup>®</sup>, PV1000 Series, CM6700/CM8500/CM9500/CM9750/CM9760 Matrix, Spectra<sup>™</sup>, DF5 Series and DF8 Fixed Dome products.
- Two (2) years on WW5700 series window wiper (excluding wiper blades).
- Two (2) years on cameras.
- Six (6) months on all pan and tilts, scanners or preset lenses used in continuous motion applications (e.g., preset scan, tour and auto scan modes).

Pelco will warranty all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Ship freight prepaid to: Pelco  
300 West Pontiac Way  
Clovis, CA 93612-5699

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

### RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair). Goods returned for repair or credit should be clearly identified with the assigned CA/RA number and freight should be prepaid. All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Ship freight prepaid to: Pelco  
300 West Pontiac Way  
Clovis, CA 93612-5699

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